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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/613,277	07/03/2003	Larry D. Kinsman	2269-5347.3US (02-0171.03)	4379
24247	7590	10/20/2004	EXAMINER MANDALA, VICTOR A	
TRASK BRITT P.O. BOX 2550 SALT LAKE CITY, UT 84110			ART UNIT 2826	PAPER NUMBER

DATE MAILED: 10/20/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/613,277

Applicant(s)

KINSMAN, LARRY D.

Examiner

Victor A Mandala Jr.

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 22 July 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 8-24 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 8-24 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>7/3/03 5/13/04</u> . | 6) <input type="checkbox"/> Other: _____  |

**DETAILED ACTION*****Double Patenting***

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

1. Claims 8, 18-21, & 24 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-3, 5, 7, & 8 of U.S. Patent No. (the number has not been issued yet on Application No. 10/230,654, but is in Publications. Although the conflicting claims are not identical, they are not patentably distinct from each other because independent claim 8 only has the addition of multiple optically interactive electronic devices, where the Patent does not claim this limitation, but it would be obvious to one having skill in the art at the time the invention was made to add multiple optically interactive electronic devices to the substrate, since it has been held that the mere duplication of the essential working parts of a device involve only routine skill in the art. *St. Regis Paper Co. vs Bomis Co.* 193USPQ8

***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 22 & 23 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 22 & 23 recites the limitation the secondary substrate. There is insufficient antecedent basis for this limitation in the claim.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 8 & 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S.

Patent No. 5,352,852 Chun.

3. Referring to claim 8, an electronic device package comprising: a transparent substrate, (Figure 4 #14); a plurality of conductive traces, (Figure 4 #13), formed on a surface of the transparent substrate, (Figure 4 #14), each conductive trace, (Figure 4 #13), of the plurality of conductive traces, (Figure 4 #13), having a first attachment point and a second attachment point; an optically interactive electronic device, (Figure 4 #12), having at least one bond pad, (Figure 3

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area #11); the optically interactive electronic device, (Figure 4 #12), mounted to the transparent substrate, (Figure 4 #14), by a bond, (Figure 3 area of #11), between the first attachment point of a conductive trace of the plurality of conductive traces, (Figure 4 #13), and the at least one bond pad, (Figure 3 area of #11); a backing cap, (Figure 4 #16), covering a back surface of the optically interactive electronic device, (Figure 4 #12), the backing cap, (Figure 4 #16), having at least one backing cap, (Figure 4 #16), attachment point, (Figure 4 #18), in electrical communication with the second attachment point of the conductive trace, (Figure 4 #13), and at least one attachment pad, (Figure 4 area of #18), on a surface of the backing cap, (Figure 4 #16), in electrical communication with the at least one backing cap attachment point and wherein the transparent substrate, (Figure 4 #13), comprises a single substrate having multiple optically interactive electronic devices, (Figure 4 #12 and see \*\* below), mounted thereto.

\*\* Chu discloses the claimed invention except for the multiple optically interactive electronic devices. It would have been obvious to one having skill in the art at the time the invention was made to add multiple optically interactive electronic devices to the substrate, since it has been held that the mere duplication of the essential working parts of a device involve only routine skill in the art. *St. Regis Paper Co. vs Bomis Co.* 193USPQ8

4. Referring to claim 17, an electronic device package, wherein the transparent substrate comprises a single substrate having a plurality of optically interactive electronic devices mounted thereto, (See \*\* above).

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 9-16 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 5,352,852 Chun.

5. Referring to claim 9, an electronic device package comprising: a transparent substrate, (Figure 4 #14); a secondary substrate, (Figure 4 #15), secured by a first surface thereof to a surface of the transparent substrate, (Figure 4 #14), having a central aperture covered by the transparent substrate, (Figure 4 #14), and a plurality of conductive traces, (Figure 4 #13), formed around the central aperture, each conductive trace of the plurality of conductive traces, (Figure 4 #13), having a first attachment point and a second attachment point on a second surface, (side surface of #15 in the horizontal direction of “on”), of the secondary substrate, (Figure 4 #15); an optically interactive electronic device, (Figure 4 #12), having at least one bond pad, (Figure 3 area of #11), the optically interactive electronic device, (Figure 4 #12), mounted to the secondary substrate by a bond, (Figure 3 #11), between the first attachment point of a conductive trace of the plurality, (Figure 4 #13), of conductive traces and the at least one bond pad, (Figure 3 area of #11); and a backing cap, (Figure 4 #16), covering a back surface of the optically interactive electronic device, (Figure 4 #12), the backing cap, (Figure 4 #16), having at least one backing cap attachment point, (Figure 4 #18), in electrical communication with the second attachment point of the conductive trace, (Figure 4 #13), and at least one attachment pad, (Figure 4 #18), on

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a surface of the backing cap, (Figure 4 #16), in electrical communication with the at least one backing cap, (Figure 4 #16), attachment point.

6. Referring to claim 10, an electronic device package, further comprising: a bond between the at least one backing cap, (Figure 4 #16), attachment point and the second attachment point of the conductive trace, (Figure 4 #13), the bond comprising one of a conductive or conductor-filled epoxy, a solder joint, (Figure 4 #18), and a layer of anisotropically conductive adhesive material.

7. Referring to claim 11, an electronic device package, further comprising: an array of attachment pads, (Figure 4 #18), on the surface of the backing cap, (Figure 4 #16).

8. Referring to claim 12, an electronic device package, further comprising: a discrete conductive element, (Figure 4 the other #18), disposed on the at least one attachment pad, (Figure 4 the area of #18), on the surface of the backing cap, (Figure 4 #16).

9. Referring to claim 13, an electronic device package, wherein the discrete conductive element comprises one of a solder ball, (Figure 4 #18), a solder column, a conductive epoxy, and a conductor-filled epoxy.

10. Referring to claim 14, an electronic device package, wherein the secondary substrate, (Figure 4 #15), comprises one of a printed circuit board, a polyimide film, a ceramic and silicon, (Col. 4 Lines 38-39 where #15 is an insulating tape and a polyimide is well known in the art to be an insulative tape material).

11. Referring to claim 15, an electronic device package, wherein an outside perimeter of the secondary substrate, (Figure 4 #15), is substantially, (the term “substantially” is a matter of degree, where the degree is broadly defined and/or not defined, hence it is substantially equal), equal to an outside perimeter of the transparent substrate, (Figure 4 #12).

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12. Referring to claim 16, an electronic device package, wherein the optically interactive electronic device comprises an image sensor, (Col. 2 Lines 49-53 & Col. 4 Lines 34-35).

*Conclusion*

  
NATHAN J. FLYNN  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2800

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Victor A Mandala Jr. whose telephone number is (571) 272-1918. The examiner can normally be reached on Monday through Thursday from 8am till 6pm..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nathan J Flynn can be reached on (571) 272-1915. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

VAMJ  
10/16/04